

(FEH) gene in the chicory roots has not been triggered by the occurrence of low temperature conditions,

- said chicory roots have had a growing period of at least 150 days,
- said chicory has been seeded
  - in the northern hemisphere within a period selected from the periods ranging from December 1 till March 14, from March 15 till May 14, from May 15 till May 31, from June 1 till June 14, and from June 15 till November 30, provided that when said chicory has been seeded in the periods from May 15 till May 31, and from June 1 till June 14, the chicory roots have had a growing period of at least 180 days, and provided that when said chicory has been seeded in the period from March 15 till May 14, the chicory roots have been grown and processed under climatological conditions wherein, within a period of at least 220 consecutive days immediately preceding the end of the processing of the roots, no low temperature conditions occurred which triggered the FEH gene, and the chicory roots have had a minimum growing period of at least 160 days,
  - in the southern hemisphere within a period selected from the periods ranging from June 1 till September 14, from September 15 till September 30, from October 1 till November 14, from November 15 till November 30, and from December 1 till May 31, and
- the inulin obtained is
  - standard grade or low sugar standard grade chicory inulin with a degree of polymerisation ( $\overline{DP}$ ) of at least 10, or
  - improved standard grade or improved low sugar standard grade chicory inulin with a mean ( $\overline{DP}$ ) of at least 12, or
  - high performance grade chicory inulin with a ( $\overline{DP}$ ) of at least 20, or

- improved high performance grade chicory inulin with a mean ( $\overline{DP}$ ) of at least 20,
- with the mean ( $\overline{DP}$ ) being taken over a processing period of at least 60 days.

30. (Amended) In a process according to claim 29, the improvement wherein the chicory has had a growing period of at least 180 days.

31. (Amended) In a process according to claim 29, the improvement wherein the chicory has been seeded in the northern hemisphere.

32. (Amended) In a process according to claim 29, the improvement wherein the roots of chicory have been grown and processed under climatological temperature conditions wherein, within a period of at least 220 consecutive days immediately preceding the end of the processing of the roots, no low temperature conditions occurred which triggered the FEH gene in chicory roots, said roots have had a growing period of at least 160 days, and the inulin obtained is improved standard grade chicory inulin with a mean ( $\overline{DP}$ ) taken over a processing period of at least 60 days, which is at least 12.

33. (Amended) In a process according to claim 32, the improvement wherein no low temperature conditions which trigger the FEH gene in chicory roots occur within a total period of at least 240 consecutive days and the chicory has had a growing period of at least 180 days.

34. (Amended) In a process according to claim 33, the improvement wherein the chicory has been seeded in the northern hemisphere within a period selected from the periods ranging from December 1 till March 14, from March 15 till May 14, from May 15 till May 31, and from June 1 till November 30, or in the southern hemisphere within a period selected from the periods ranging from June 1 till September 14, from September 15 till November 14, from November 15 till November 30, and from December 1 till May 31.

35. (Amended) In a process according to claim 29, the improvement wherein the said climatological temperature conditions are such that during the concerned period immediately preceding the end of the processing of the chicory roots the temperature in the region shall not have dropped below minus 1°C.

36. (Amended) In a process according to claim 29, the improvement wherein said appropriate regions comprise the Californian region of the USA.

37. (Amended) In a process according to claim 29, the improvement wherein the source material are chicory roots which have been grown and processed under the conditions as defined in claim 29, said process further comprising the steps of:

- (i) isolation of the inulin from the chicory roots yielding an aqueous solution of crude inulin,
- (ii) purification of the crude inulin obtained in step (i) yielding an aqueous solution of purified inulin, optionally followed by concentration of this solution by partial removal of the water yielding a purified inulin concentrate, and
- (iii) isolation in particulate form of the inulin from the aqueous solution or concentrate of purified inulin obtained in step (ii), thereby yielding, respectively, standard grade chicory inulin or improved standard grade chicory inulin.

38. (Amended) In a process according to claim 37, the improvement comprising:

- for step (i): extraction with hot water of the inulin from fresh slices or shreds of the chicory roots, yielding an aqueous solution of crude inulin,
- for step (ii): purification of the aqueous solution of crude inulin obtained in step (i) by depuration followed by refining, and

- for step (iii): isolation of, respectively, standard grade chicory inulin or improved standard grade chicory inulin, in particulate form by spray drying.

39. (Amended) In a process according to claim 29, for the manufacture of low sugar standard grade chicory inulin or improved low sugar standard grade chicory inulin containing in total less than 1 weight % monomeric saccharides and sucrose, by conventional techniques from chicory roots, the improvement wherein the source material are chicory roots which have been grown and processed under the conditions as defined in claim 29.

40. (Amended) In a process according to claim 39, the improvement wherein, respectively, standard grade chicory inulin or improved standard grade chicory inulin or a corresponding intermediate purified inulin, obtained by a process defined in claim 29 is used as a source material and is, in accordance with known techniques, subjected to the following additional consecutive steps:

(iv) removal of the monomeric saccharides and sucrose, yielding a low sugar inulin solution or concentrate, and

(v) isolating the low sugar inulin in particulate form from the solution or concentrate obtained in step (iv),

and the product obtained is, respectively, low sugar standard grade chicory inulin with a mean ( $\overline{DP}$ ) of at least 10 or improved low sugar standard grade chicory inulin with a mean ( $\overline{DP}$ ) of at least 12, the mean ( $\overline{DP}$ ) being taken over a processing period of at least 60 days.

41. (Amended) In a process according to claim 29, for the manufacture of high performance grade chicory inulin with a ( $\overline{DP}$ ) of at least 20, or improved high performance grade chicory inulin with a mean ( $\overline{DP}$ ), taken over a processing period of the chicory roots of at least 60 days, of at least 20, which are essentially free from low molecular monomeric

saccharides, dimeric saccharides and oligofructose, and essentially free from colorings, salts, proteins, organic acids and technological aids, the improvement wherein the source material are chicory roots which have been grown and processed under the conditions as defined in claim 29.

42. (Amended) In a process according to claim 41, the improvement wherein standard grade chicory inulin with a ( $\overline{DP}$ ) of at least 12, respectively improved standard grade chicory inulin with a mean ( $\overline{DP}$ ), taken over a processing period of the chicory roots of at least 60 days, of at least 12, or its intermediate, depurated or refined inulin, obtained by a process defined in claim 29, is used as a source material and subjected, in accordance with known techniques, to the following consecutive steps:

(vi) fractionation, and

(vii) isolation in particulate form of the high performance grade inulin from the fractionated product obtained in step (vi),  
thereby providing high performance grade chicory inulin, respectively improved high performance grade chicory inulin in a yield of at least 40% based on the source inulin.

43. (Amended) In a process according to claim 42, the improvement wherein the fractionation is carried out by directed crystallization of an aqueous metastable solution of the source material, and the isolation of the fractionated inulin in particulate form is carried out by filtration or centrifuging including washing with water.

44. (Amended) In a process according to claim 42, the improvement wherein the source inulin has a ( $\overline{DP}$ ), respectively a mean ( $\overline{DP}$ ) of at least 14, and the high performance grade chicory inulin, respectively improved high performance grade chicory inulin, is obtained in a yield of at least 45% based on the source material, and has a ( $\overline{DP}$ ), respectively a mean , of at

least 20, the mean ( $\overline{DP}$ ) being taken over a processing period of the source chicory roots of at least 60 days.

45. (Amended) In a process for the manufacture of a partial hydrolysate of chicory inulin, by conventional techniques from chicory roots, the improvement wherein the source material are chicory roots which have been grown and processed under the conditions as defined in claim 29 and the product obtained in polydisperse oligofructose.

46. (Amended) In a process according to claim 45, the improvement wherein respectively, standard grade or improved standard grade chicory inulin or the corresponding intermediates, depurated or refined inulin, obtained by a process defined in claim 29, is used as a source material, and the product obtained is polydisperse oligofructose containing at least 90% by weight dry substance and the oligofructose has a ( $\overline{DP}$ ) from 2 to 10.

47. (Amended) In a process for the manufacture of a complete hydrolysate of chicory inulin, by conventional techniques from chicory roots, the improvement wherein the source material are chicory roots which have been grown and processed under the conditions as defined in claim 29, and the product obtained is fructose.

48. (Amended) In a process according to claim 47, the improvement wherein, respectively, standard grade or improved standard grade inulin or the corresponding intermediate, depurated or refined inulin, obtained by a process defined in claim 29, is used as a source material, and the product obtained is fructose containing at least 89% by weight fructose, calculated on dry substance.

49. (Amended) In a process for the manufacture of a derivative of chicory inulin, by conventional techniques from chicory inulin or an intermediate thereof, the improvement